

newberryi (Lea), *Planorbis trivolvis* Say and *Planorbis vermicularis* Gould.² To these Hannibal added *Lymnaea cubensis* Pfeiffer and *Planorbis dilatatus* Gould, both probably wrong, and *Pompholyx effusa* Lea.³ Hannibal also reported, in the same paper, the following from the Summer Lake Beds, Quaternary, of Oregon: *Pisidium abditum* Haldeman, *Pisidium pulchella* Jenyns, *Planorbis dilatatus* Gould, *Valvata tricarinata* (Say), *Lanx klamathensis* Hannibal, *Pompholyx effusa* Lea, and *Paludestrina protea* Gould. The first four are almost certainly erroneous. His synonymies are not such as to give one the least bit of confidence in his identifications. The other three are not unlikely. Doubtless a general molluscan survey of the lakes and the adjacent lacustrine deposits of eastern Oregon and Eastern Washington would be of great interest.

VENUS MERCENARIA VAR. NOTATA SAY

WILLIAM J. CLENCH

There seems to be considerable confusion between this well-known form of Say's and certain colored forms of *Venus campechiensis* Gmel.

Venus mercenaria notata Say appears usually as a single specimen in a colony populated by *V. mercenaria*. This fact of its thus occurring with the common species precludes any idea of its being either an ecological form or a geographical race. From the evidence at hand, it seems to be a recessive form appearing only as an individual here and there when the dominant factors are eliminated by chance breeding.

² Call, Bulletin U. S. Geological Survey, No. 11, 1884.

³ Hannibal, Proc. Malac. Soc. London, X, 1912.

Its differential characters are in a linkage chain, as its smaller size, zig-zag markings, light yellowish-white interior and more shining exterior (not chalky as in *V. mercenaria*) are invariably associated. DeKay¹ cites the outer bars, in deep water, along the Long Island beaches as its usual habitat, but it is found in protected areas as well.

The color form of *Venus campechiensis*, though superficially resembling *V. mercenaria notata*, can be readily separated when the two are compared.

The following comparisons serve to separate these puzzling forms:

<i>Venus mercenaria</i> Linn.	<i>Venus campechiensis</i> Gmel.
Obliquely ovate.	Rounded.
Chalky in appearance. Interior usually, though not always, tipped with bluish-purple, the color sometimes extending along the entire margin between the pallial line and the edge.	Dull, but not chalky. Interior white, never colored bluish-purple.
Disk smooth, concentric lines entirely obliterated over this area.	Concentric ridges extending unmodified across the disk.
Lunule pointed below.	Lunule rounded below.
Escutcheon white.	Escutcheon usually colored brownish or dull purplish, though sometimes white.
	<i>V. mercenaria</i> var. <i>notata</i>
	Say
Interior color as above.	Interior color yellowish white.
Exterior texture appearance as above.	Exterior not chalky but smooth and generally shining.
Exterior not colored.	Exterior with zig-zag markings usually in definite bands along the lower portion of the disk.

The colored forms of *V. campechiensis* differ from the normal only in the presence of colored zig-zag lines. These

¹ DeKay, J. E., Moll, of New York, 1843, p. 218.

lines are most abundant in the umbonal region, though occasional specimens exhibit them over the entire surface of the disk. The angles formed by the junction of these lines are much broader than the angles so formed in *V. mercenaria notata*.

Excellent figures of *V. mercenaria* var. *notata* are given by DeKay (loc. cit.) pl. 27, fig. 278, and Gould, Invert. Mass. 1870, p. 135, fig. 52.

PLANOGYRA ASTERISCUS (MORSE)

BY H. BURRINGTON BAKER

Last summer, I obtained a large series of this peculiar little species near the University of Michigan Biological Station at Douglas Lake, Cheboygan County, Michigan. In this region, *P. asteriscus* is quite common under dead leaves in the strand-line between the water-soaked, *Sphagnum* mats of the arborvitae-spuce bogs and the fringe of low, deciduous trees around their borders. Although it occurs rarely outside of this zone, a very few feet in either direction makes a very remarkable difference in its frequency. Near the shore of Big Stone Bay, Straits of Mackinac (Emmet County), it is also quite common in the damp swales between the low, fixed sanddunes. *P. asteriscus* and *Carychium exile canadense* seem to prefer the deeper layers of the fallen leaves and are seldom found crawling on the surface or in the vicinity of logs. The high, epidermal riblets that characterize the shell of *P. asteriscus* are quite rectilinear in moist (living) specimens, but become wavy when dried.

The anatomy of *P. asteriscus*, which I hope to figure and describe more fully in a later paper, is very similar to that